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In the settlement proposal in the case of US Department Of Justice v. Microsoft Corp. there are many weaknesses. Below is a list of some of the more glaring misgivings I have concerning the case:

I. How should terms like "API", "Middleware, and "Windows OS" be defined?

The Findings of Fact (? 2) define "API" to mean the interfaces between application programs and the operating system. However, the PFJ's Definition A defines it to mean only the interfaces between Microsoft Middleware and Microsoft Windows, excluding Windows APIs used by other application programs. For instance, the PFJ's definition of API might omit important APIs such as the Microsoft Installer APIs which are used by installer programs to install software on Windows.

The Findings of Fact (? 28) define "middleware" to mean application software that itself presents a set of APIs which allow users to write new applications without reference to the underlying operating system. Definition J defines it in a much more restrictive way, and allows Microsoft to exclude any software from being covered by the definition in two ways:

1. By changing product version numbers. For example, if the next version of Internet Explorer were named "7.0.0" instead of "7" or "7.0", it would not be deemed Microsoft Middleware by the PFJ.
2. By changing how Microsoft distributes Windows or its middleware. For example, if Microsoft introduced a version of Windows which was only available via the Windows Update service, then nothing in that version of Windows would be considered Microsoft Middleware, regardless of whether Microsoft added it initially or in a later update. This is analogous to the loophole in the 1995 consent decree that allowed Microsoft to bundle its browser by integrating it into the operating system.

Definition K defines "Microsoft Middleware Product" to mean essentially Internet Explorer (IE), Microsoft Java (MJ), Windows Media Player (WMP), Windows Messenger (WM), and Outlook Express (OE).

The inclusion of Microsoft Java and not Microsoft.NET is questionable; Microsoft has essentially designated Microsoft.NET and C# as the successors to Java, so on that basis one would expect Microsoft.NET to be included in the definition.

The inclusion of Outlook Express and not Outlook is questionable, as Outlook (different and more powerful than Outlook Express) is a more important product in business, and fits the definition of middleware better than Outlook Express.

The exclusion of Microsoft Office is questionable, as many components of Microsoft Office fit the Finding of Fact's definition of middleware. For instance, there is an active market in software written to run on top of Microsoft Outlook and Microsoft Word, and many applications are developed for Microsoft Access by people who have no knowledge of Windows APIs.

Microsoft's monopoly is on Intel-compatible operating systems. Yet the PFJ in definition U defines a "Windows Operating System Product" to mean only Windows 2000 Professional, Windows XP Home, Windows XP Professional, and their successors. This purposely excludes the Intel-compatible operating systems Windows XP Tablet PC Edition and Windows CE; many applications written to the Win32 APIs can run unchanged on Windows 2000, Windows XP Tablet PC Edition, and Windows CE, and with minor recompilation, can also be run on Pocket PC. Microsoft even proclaims at www.microsoft.com/windowsxp/tabletpc/tabletpcqanda.asp:

"The Tablet PC is the next-generation mobile business PC, and it will be available from leading computer makers in the second half of 2002. The Tablet PC runs the Microsoft Windows XP Tablet PC Edition and features the capabilities of current business laptops, including attached or detachable keyboards and the ability to run Windows-based applications." and
Pocket PC: Powered by Windows Microsoft is clearly pushing Windows XP Tablet PC Edition and Pocket PC in places (e.g. portable computers used by

businessmen) currently served by Windows XP Home Edition, and thus appears to be trying to evade the Final Judgment's provisions. This is but one example of how Microsoft can evade the provisions of the Final Judgment by shifting its efforts away from the Operating Systems listed in Definition U and towards Windows XP Tablet Edition, Windows CE, Pocket PC, X-Box, or some other Microsoft Operating System that can run Windows applications.

II. How should the Final Judgment erode the Applications Barrier to Entry?

The PFJ tries to erode the Applications Barrier to Entry in two ways:

1. By forbidding retaliation against OEMs, ISVs, and IHVs who support or develop alternatives to Windows.
2. By taking various measures to ensure that Windows allows the use of non-Microsoft middleware. A third option not provided by the PFJ would be to make sure that Microsoft raises no artificial barriers against non-Microsoft operating systems which implement the APIs needed to run application programs written for Windows. The Findings of Fact (?52) considered the possibility that competing operating systems could implement the Windows APIs and thereby directly run software written for Windows as a way of circumventing the Applications Barrier to Entry. This is in fact the route being taken by the Linux operating system, which includes middleware (named WINE) that can run many Windows programs.

By not providing some aid for ISVs engaged in making Windows-compatible operating systems, the PFJ is missing a key opportunity to encourage competition in the Intel-compatible operating system market. Worse yet, the PFJ itself, in sections III.D. and III.E., restricts information released by those sections to be used "for the sole purpose of interoperating with a Windows Operating System Product". This prohibits ISVs from using the information for the purpose of writing operating systems that interoperate with Windows programs.

III. How should the Final Judgment be enforced?

The PFJ as currently written appears to lack an effective enforcement mechanism. It does provide for the creation of a Technical Committee with investigative powers, but appears to leave all actual enforcement to the legal system.

IV. What information needs to be released to ISVs to encourage competition, and under what terms?

The PFJ provides for increased disclosure of technical information to ISVs, but these provisions are flawed in several ways:

1. Section III.H.3. of the PFJ requires vendors of competing middleware to meet "reasonable technical requirements" seven months before new releases of Windows, yet it does not require Microsoft to disclose those requirements in advance. This allows Microsoft to bypass all competing middleware simply by changing the requirements shortly before the deadline, and not informing ISVs.
2. Section III.D. of the PFJ requires Microsoft to release via MSDN or similar means the documentation for the APIs used by Microsoft Middleware Products to interoperate with Windows; release would be required at the time of the final beta test of the covered middleware, and whenever a new version of Windows is sent to 150,000 beta testers. But this information would almost certainly not be released in time for competing middleware vendors to adapt their products to meet the requirements of section III.H.3, which states that competing middleware can be locked out if it fails to meet unspecified technical requirements seven months before the final beta test of a new version of Windows.
3. The PFJ's overly narrow definitions of "Microsoft Middleware Product" and "API" means that Section III.D.'s requirement to release information about Windows interfaces would not cover many important interfaces.

4. ISVs writing competing operating systems as outlined in Findings of Fact (?52) sometimes have difficulty understanding various undocumented Windows APIs. The information released under section III.D. of the PFJ would aid those ISVs -- except that the PFJ disallows this use of the information. Worse yet, to avoid running afoul of the PFJ, ISVs might need to divide up their engineers into two groups: those who refer to MSDN and work on Windows-only applications; and those who cannot refer to MSDN because they work on applications which also run on non-Microsoft operating systems. This would constitute retaliation against ISVs who support competing operating systems.
5. No part of the PFJ obligates Microsoft to release any information about file formats, even though undocumented Microsoft file formats form part of the Applications Barrier to Entry (see "Findings of Fact" ?20 and ? 39).
6. Section III.I of the PFJ requires Microsoft to offer to license certain intellectual property rights, but it does nothing to require Microsoft to clearly announce which of its many software patents protect the Windows APIs (perhaps in the style proposed by the W3C; see <http://www.w3.org/TR/2001/WD-patent-policy-20010816/#sec-disclosure>). This leaves Windows-compatible operating systems in an uncertain state: are they, or are they not infringing on Microsoft software patents? This can scare away potential users, as illustrated by this report from Codeweavers, Inc.:

When selecting a method of porting a major application to Linux, one prospect of mine was comparing Wine [a competing implementation of some of the Windows APIs] and a toolkit called 'MainWin'. MainWin is made by Mainsoft, and Mainsoft licenses its software from Microsoft. However, this customer elected to go with the Mainsoft option instead. I was told that one of the key decision making factors was that Mainsoft representatives had stated that Microsoft had certain critical patents that Wine was violating. My customer could not risk crossing Microsoft, and declined to use Wine. I didn't even have a chance to determine which patents were supposedly violated; nor to disprove the validity of this claim.

The PFJ, by allowing this unclear legal situation to continue, is inhibiting the market acceptance of competing operating systems.

V. Which practices towards OEMs should be prohibited?

The PFJ prohibits certain behaviors by Microsoft towards OEMs, but curiously allows the following exclusionary practices:

Section III.A.2. allows Microsoft to retaliate against any OEM that ships Personal Computers containing a competing Operating System but no Microsoft operating system.

Section III.B. requires Microsoft to license Windows on uniform terms and at published prices to the top 20 OEMs, but says nothing about smaller OEMs. This leaves Microsoft free to retaliate against smaller OEMs, including important regional 'white box' OEMs, if they offer competing products.

Section III.B. also allows Microsoft to offer unspecified Market Development Allowances -- in effect, discounts -- to OEMs. For instance, Microsoft could offer discounts on Windows to OEMs based on the number of copies of Microsoft Office or Pocket PC systems sold by that OEM. In effect, this allows Microsoft to leverage its monopoly on Intel-compatible operating systems to increase its market share in other areas, such as office software or ARM-compatible operating systems.

By allowing these practices, the PFJ is encouraging Microsoft to extend its monopoly in Intel-compatible operating systems, and to leverage it into new areas.

VI. Which practices towards ISVs should be prohibited?

Sections III.F. and III.G. of the PFJ prohibit certain exclusionary licensing practices by Microsoft towards ISVs.

However, Microsoft uses other exclusionary licensing practices, none of which are mentioned in the PFJ. Several of Microsoft's products' licenses prohibit the products' use with popular non-Microsoft middleware and operating systems. Two examples are given below.

1. Microsoft discriminates against ISVs who ship Open Source applications

The Microsoft Windows Media Encoder 7.1 SOFTWARE DEVELOPMENT KIT END USER LICENSE AGREEMENT states:

... you shall not distribute the REDISTRIBUTABLE COMPONENT in conjunction with any Publicly Available Software. "Publicly Available Software" means each of (i) any software that contains, or is derived in any manner (in whole or in part) from, any software that is distributed as free software, open source software (e.g. Linux) or similar licensing or distribution models ... Publicly Available Software includes, without limitation, software licensed or distributed under any of the following licenses or distribution models, or licenses or distribution models similar to any of the following: GNU's General Public License (GPL) or Lesser/Library GPL (LGPL); The Artistic License (e.g., PERL); the Mozilla Public License; the Netscape Public License; the Sun Community Source License (SCSL); ...

Many Windows APIs, including Media Encoder, are shipped by Microsoft as add-on SDKs with associated redistributable components. Applications that wish to use them must include the add-ons, even though they might later become a standard part of Windows. Microsoft often provides those SDKs under End User License Agreements (EULAs) prohibiting their use with Open Source applications. This harms ISVs who choose to distribute their applications under Open Source licenses; they must hope that the enduser has a sufficiently up-to-date version of the add-on API installed, which is often not the case.

Applications potentially harmed by this kind of EULA include the competing middleware product Netscape 6 and the competing office suite StarOffice; these EULAs thus can cause support problems for, and discourage the use of, competing middleware and office suites. Additionally, since Open Source applications tend to also run on non-Microsoft operating systems, any resulting loss of market share by Open Source applications indirectly harms competing operating systems.

2. Microsoft discriminates against ISVs who target Windows-compatible competing Operating Systems

The Microsoft Platform SDK, together with Microsoft Visual C++, is the primary toolkit used by ISVs to create Windows-compatible applications. The Microsoft Platform SDK EULA says:

"Distribution Terms. You may reproduce and distribute ... the Redistributable Components... provided that (a) you distribute the Redistributable Components only in conjunction with and as a part of your Application solely for use with a Microsoft Operating System Product..." This makes it illegal to run many programs built with Visual C++ on Windows-compatible competing operating systems. "

By allowing these exclusionary behaviors, the PFJ is contributing to the Applications Barrier to Entry faced by competing operating systems.

The Preceding examples are only but a few of the potential loop-holes in the Proposed settlement. For a more complete listing, please refer to :

<http://crossover.codeweavers.com/mirror/www.kegel.com/remedy/remedy2.html>

Mr. Dan Kegel has performed a great deal of research and speaks for a large

number of software developers, systems engineers, and various other information technology professionals with his misgivings.

Also, more information can be found at:

<http://www.salon.com/tech/col/rose/2002/01/16/competition/index.html>
http://www.boston.com/dailyglobe2/015/business/Microsoft_case_key_to_tech_s_future+.html
<http://computeruser.com/articles/2101,3,1,1,0101,02.html>
http://linuxtoday.com/news_story.php3?ltsn=2002-01-02-002-20-OP-MS

Please take these items under consideration prior to approving the proposed settlement, as the PFJ as it stands will not only fail to achieve the goal set forth by the findings in the case; but it may in fact drive Microsoft's anti-competitive practices to an all time high.

Respectfully,

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